

REMARKS

Claims 7-18 are pending in this application. Claims 1-6 have been canceled.

The Examiner has objected to FIGS. 24, 26, 28 and 30 for failing to show “wherein no portion of a magnetic field produced by the permanent magnet passes through the rotating shaft,” as claimed in the instant application.

Applicants respectfully disagree. Page 56, lines 3-18 of the specification supports this proposition, where it is stated that the magnetic field “bypasses” the rotating shaft 6 or, in other words, the magnetic field “avoids passing” thorough the rotating shaft 6.

Accordingly, FIG. 30 has been corrected to show no flux lines passing through shaft 6, which is supported by the passage cited above. A replacement drawing sheet for FIG. 30 is attached hereto.

The Examiner has maintained from the previous Office Action the 35 U.S.C. § 102(b) rejection of claims 7-9 as anticipated by Kapadia; the 35 U.S.C. § 103(a) rejection of claims 10-12 and 16-18 as unpatentable over Naito et al. in view of Liu et al.; and the 35 U.S.C. § 103(a) rejection of claims 13-15 as unpatentable over Kapadia in view of Narita et al.

Applicants respectfully traverse these rejections.

As noted in Applicants’ response of August 3, 2005, regarding the rejection of claims 7-9 and 13-15, none of the cited references teaches, mentions or suggests that no portion of the magnetic field passes through the rotating shaft, as recited in the claims.

Regarding the rejection of claims 10-12 and 16-18, in Applicants' response of August 3, 2005, it was argued Naito et al. discloses a permanent magnet rotor having a series of slots 12A, 12B and 12C curving away from the center shaft. Permanent magnets are embedded in the slots 12A, 12B and 12C. The slots are all arcuate and curve away from the center rotating shaft.

This is in contrast to the present invention, in which the magnets either have a linear shape, as shown, for example, in FIGS. 40-41 and 43, or an arcuate shape curving around the center shaft, as shown in FIG. 42.

Claims 10-12 recite that the secondary permanent magnets each have a linear shape. Claims 16-18 recite secondary permanent magnets having an arcuate shape curving around the center rotating shaft.

Liu et al. discloses a permanent magnet rotor configuration which produces four magnetic poles utilizing two sets of symmetrically-disposed permanent magnets. The slots carrying the magnets exhibit a truncated V-shaped configuration, extending from points on the periphery of the rotor to meet the ends of a straight, central portion which lies parallel to a tangent to the rotor shaft. A short magnetic bridge interrupts the center of each slot, the slots being disposed generally symmetrically upon opposite sides of the rotor shaft.

Liu et al., like Naito et al., discussed above, fails to teach, mention or suggest the linear or arcuate shape of the secondary permanent magnets.

In the Office Action, the Examiner asserts:

Regarding claims 10-12 and 16-18, the applicant's argument is on the ground that "the magnets either have a linear shape, as show in in Figs. 40, 41 and 43 or an arcuate shape as shown in Fig. 42." The Examiner respectfully disagrees with the Applicant because the claims clearly recite two kind of permanent magnets: a permanent magnet embedded in the rotor yoke which does not have a length radially disposed and secondary permanent magnets each having a linear shape in claims 10-12 (or secondary permanent magnets each having an arcuate shape...as in claims 16-18). For the reason explained above, the rejection is still deemed proper.

Applicants do not understand the Examiner's argument. Clearly, neither Naito et al. nor Liu et al. teaches, mentions or suggests either:

- 1). The linear secondary magnets recited in claims 10-12; or
- 2). Secondary magnets having an arcuate shape curving around the rotating shaft (in Naito et al., the magnets curve away from the rotating shaft), as recited in claims 16-18.

In view of the aforementioned remarks, claims 7-18 are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

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Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosure: Replacement Drawing Sheet (FIG. 30)

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IN THE DRAWINGS:

The attached sheet of drawings includes changes to FIG. 30. This sheet should replace the original sheet including FIG. 30.